MODULE 2: SIZE-UP

OBJECTIVES

The students will:

1. *Describe the three phases of size-up and their relationship to problem identification.*

2. *Describe the factors that affect size-up.*

3. *Given a simulated structural fire incident, demonstrate the ability to conduct an effective size-up, identify the problems presented, and communicate critical information as a part of a concise size-up report.*

NOTE-TAKING GUIDE

THREE PHASES OF SIZE-UP

Phase One: Preincident Information.

What you know before the incident.

Phase Two: Initial Size-up.

What you see and hear from the time of dispatch and upon arrival at the incident.

Phase Three: Ongoing Size-up.

The gathering of information throughout the incident.

NOTE-TAKING GUIDE

PHASE ONE: PREINCIDENT INFORMATION

Size-up is more than what you see through the window when you arrive at the scene.

Value of preincident information to the IC.

It's hard to obtain preincident information when the flames are licking at the cases of dynamite.

Preplans.

Occupancy information.

Water supply.

Environmental conditions.

NOTE-TAKING GUIDE

Time of day.

Area knowledge.

Departmental resources.

Interagency/Private sector assistance.

PHASE TWO: INITIAL SIZE-UP

A rapid mental evaluation of various factors related to an emergency incident.

First objective is to identify problem(s).

NOTE-TAKING GUIDE

Use preincident information to help with initial size-up.

Dispatch information can give an indication of the extent of problems.

What should initial size-up include?

Size-up factors to consider.

RISK/BENEFIT EVALUATION

The IC needs to determine if risks taken are worth benefits gained. **See Incident Priority 1** (life safety).

If IC judges it is worth risk, for how long?

Selecting operational mode.

NOTE-TAKING GUIDE

Resource evaluation.

Committing resources.

COMMAND DECISIONS

The first-arriving officer has a critical command decision to make, his/her initial role:

Command.

Combat.

Combative commander.

NOTE-TAKING GUIDE

BRIEF INITIAL REPORT

First-arriving officer should paint a vivid word picture of conditions.

What do I have?

What am I doing?

What do I need?

Who is in command?

Good size-up report alerts others.

NOTE-TAKING GUIDE

PHASE THREE: ONGOING SIZE-UP

Size-up needs to be ongoing.

Situation status: Ongoing analysis of the progress of the incident.

Resource status: Analysis of effectiveness of current resources and identification of needed or anticipated resources.

Responsibility for ongoing flow of information.

Size-up and problem identification constitute the **thinking** phase of the command sequence.

NOTE-TAKING GUIDE

SUMMARY

Three phases of size-up.

Preincident information can help the IC.

Initial size-up answers the following:

Three important considerations that are part of an initial size-up.

Ongoing size-up is important to the IC because it:

Everyone is responsible for the ongoing flow of information throughout the incident.

THREE PHASES OF SIZE-UP

When asked to define size-up, most firefighters tend to think of what they observe upon arrival at the scene of an incident. To make the most of the information available in doing a size-up we should instead think of it in three distinct phases:

1. Preincident information: What you know before the incident.

2. Initial size-up: What you see and hear from the time of dispatch and upon arrival at the incident.

3. Ongoing size-up: The gathering of information throughout the incident.

PHASE ONE: PREINCIDENT INFORMATION

A wealth of information is available prior to the alarm sounding. It is known as preincident information, those factors known before the incident that may affect decisions or actions.

Preplans

One of the most valuable sources of information available is the use of **prefire plans**. Good prefire planning provides a thorough understanding of the building construction, occupancy, access points, water supply, probable fire behavior prediction, safety hazards to firefighters and occupants, resource needs, and is a training tool for companies.

Occupancy Information

If fire personnel are familiar with their response areas, they should have a basic understanding of a variety of factors that could affect the decisions that are made and the actions firefighters might need to take. Included in those factors would be typical **occupancy information** in an area. The address of the response should indicate whether the typical occupancy is in a residential neighborhood, commercial area, rural, or a target hazard. It should also give an indication as to the type of people who might be occupying the building at the time of alarm. Based on the neighborhood of the response, a judgment often can be made as to the type of construction found in the area. A residential area should cue the officer to expect human occupancy 24 hours per day, 365 days per year. The officer must expect people to be home and can conclude otherwise only after a primary search has been completed.

A commercial area should cue the officer to expect possible high-density populations during normal business hours, with limited population density after business hours. In addition, fire and emergency services personnel should expect a commercial occupancy to have various types of fire loads and occupancy uses (e.g., furniture refinishing, printing companies, etc.) with the resulting possibility of hazardous materials on the premises.

A rural area should cue the officer to expect to have to establish an effective water supply and to call the needed resources at the first indication of fire/smoke conditions. If life safety becomes a concern, early activation of EMS or rescue resources should be considered, e.g., ALS or a helicopter.

Dispatch to a previously identified target hazard should cue the officer to expect high-density populations, a high dollar value fire, or a complex operation. There may be a large and infirm population, so there may be a need to relocate a large number of occupants. The community may depend on the facility for its economic stability (e.g., a manufacturing plant), or the facility may pose unique problems, such as those created when dealing with hazardous materials.

Water Supply

The fire officer must understand the water system or static water sources in his/her response area. A reliable, adequate municipal water system indicates that there is sufficient water to control fires within the system's service area. This does not necessarily mean that there is an infinite quantity of water available, but rather that there is sufficient fire flow for prevailing conditions such as environmental, building density, building construction types, distances between structures, etc.

Where there is less-than-adequate supply available from a municipal system it is expected that there will be inadequate fire flow to control a fire above a given magnitude. For example, a building with a 25-percent involvement may require 800 gpm to be applied, yet the water system can only supply 500 gpm. This fact affects strategy, tactics, the action plan, and the amount of fire loss that probably is going to occur. Plans should be made beforehand to address areas where water supply is insufficient to handle expected fire flow.

Static water supplies are ponds, lakes, streams, rivers, bays, etc. The officer must understand the time involved in filling apparatus and making round trips to the incident scene from the water source. The officer also must have knowledge of the quantity of water available, the static source available in the extremes of summer and winter, and how accessible its location is to vehicles.

Environmental Conditions

The **environmental conditions** can have a significant impact on how effectively our resources operate. Extremes in weather can adversely affect how long and how fast personnel can operate. In hot weather firefighters will tire quickly and need relief sooner than under normal conditions. Snow, ice, and cold can have the same effect, and can slow operations considerably. Response time also can be slowed by snow and ice. Fire behavior can be affected by environmental conditions. Dry stuff burns faster than wet stuff.

Time of Day

Time of day may indicate high or low population probability in most occupancies based on typical occupancy times. For example, schools on school days from 7:00 a.m. to 3:30 p.m. are heavily populated. Stores in a mall at 1:00 a.m. tend to be uninhabited. The day of the week also affects population probabilities in certain occupancies, as does season of the year. Rush-hour traffic can delay or alter response routes. Also, the tendency for arsonists to set incendiary fires is greater late at night or in the early morning hours.

Area Knowledge

Each of us has knowledge and understanding of our individual response area or district. This specific **area knowledge** can include a wide range of information such as best response routes, natural barriers like rivers or unsafe bridges, access problems, unusual hazards such as a rattlesnake breeding farm, nuclear power plant, fireworks factory, or a host of other unique hazards. It is likely that much of this type of information is kept in the memory of fire officers. While some of the information may be on the preplan (access problems, rattlesnake breeding farm, nuclear power plant, etc.) such things as best response routes, natural barriers, or unsafe bridges probably do not make the prefire plan. Firefighters should think of their minds as computers and endeavor to load as much information as they can, both on and off duty. View your area with an eye toward how you would fight a fire in a particular building, or consider what problems it might present. Making a habit of this may be of immeasurable help if you are ever called to the real thing. In addition, it can be a fun and productive thing to do as a company.

Departmental Resources

In every department there needs to be a clear understanding of what **departmental resources** you can expect at the time of response, and what additional resources are available. Many departments have a set response of apparatus and personnel that will be dispatched to a typical type of emergency. Other departments, such as volunteer or combination departments, may have varied resources based on the time of day of the alarm. Larger departments may have fewer resources or delayed support if simultaneous emergencies are occurring. We also should consider mutual aid companies, specialized departmental equipment, and personnel with specialized skills or knowledge as available resources.

Interagency/Private Sector Assistance

Many of us tend to think of available resources in terms of fire apparatus and firefighters. Not all emergencies can be handled with just the apparatus, equipment, and people the fire department can provide. We also must be planning for those emergencies beyond the scope of the fire department, and require the resources available through **interagency or private sector assistance**. Private contractors, other emergency response agencies, State, county, and municipal agencies, utility companies, service agencies such as Red Cross and the Salvation Army, all are capable of providing assistance or support that will allow the fire department to concentrate on doing what it does best. The time to identify these resources is during area-wide emergency planning and not during the incident.

The more preincident information the first-arriving officer has available the better that officer will be able to do an on-scene size-up and determine what is happening and what problem(s) exist. It gives the officer a running start in developing an action plan and protecting the safety of personnel. Preincident information goes a long way towards reducing the amount of uncertainty you will have to face.

A point to remember: It's hard to obtain preincident information when the flames are licking at the cases of dynamite.

PHASE TWO: INITIAL SIZE-UP

The second phase of size-up starts with the initial dispatch information, additional information received en route, and what the first-arriving officer is able to observe upon arrival. We typically think of this as the initial size-up, a rapid mental evaluation of various factors related to an

emergency incident. Following is an example of information received during initial size-up.

- A first alarm assignment is dispatched to a structure fire:

  - Dispatch to all companies.

  - Attention Engines 1, 2, 3, Truck 1, Battalion Chief 1.

  - Respond to a building fire, Hein's Hardware Store, 101 Crain Highway.

  - Fire is reported in the basement.

- Enroute information:

  - Engine 1, Battalion 1 from dispatch.

  - Further reports from the structure fire at Hein's Hardware. Fire and smoke are seen coming from the attic.

Identify the Problem(s)

When the incident is of any magnitude, stress level is at its highest, information is limited, and the need to take quick action may be overpowering. What the first-arriving officer should understand is that the need to take quick action must be balanced with the higher priority of identifying the action problem or problems. As an example, initial reports may indicate that a strip shopping center with a common attic space above all the occupancies has a well-involved fire in a single occupancy. Taking the time to look for potential problems would likely help uncover the fact that this fire has probably reached the common attic space. Given this knowledge, the appropriate response would be to vertically ventilate the roof and complete horizontal ventilation, stop the fire from spreading into the adjacent occupancies on either side, and extinguish the fire in the involved occupancy.

An officer who takes action without recognizing the high probability of fire in the common attic space will simply attack the fire without checking for extension or vertically ventilating. This most often results in the fire gaining headway in the common attic and the loss of most of the strip shopping center building. Taking action may satisfy primal urges, but unless we do our best to identify the problem first we are not ready to offer a solution.

The first-arriving officer must take the time to assess conditions **calmly**, and to be **proactive** rather than **reactive**. Preplans and any other preincident information should be utilized. It is also the officer's first opportunity to identify any hazards present which may be a threat to the safety of firefighters or civilians.

Three Size-Up Questions

The officer should attempt to answer three questions in doing the size-up:

1. What do I have? (Problem identification.)

2. Where is it going? (Fire behavior prediction.)

3. How do I control it? (Resource identification and application.)

Answers to these questions are based on various items of information that are obtained either before the emergency occurs (preincident information) or at the incident scene. These items of information can take many different forms but usually are related to the following subjects:

1. Construction of the building.

2. Occupancy and contents.

3. Location of the building.

4. Location and extent of fire.

5. Time and weather impact.

6. Probable fire behavior.

7. Preplan considerations.

8. Resource evaluation.

The **construction of the building** will indicate the probable rate of burning, possible avenues of fire spread, and many of the problems, which will have a direct bearing on efforts to confine the fire. For example, consider a building of wood-frame, balloon construction with a fire that probably has penetrated the wall assembly. The fire will be able to spread through the combustible wall assembly vertically until it reaches a floor assembly or the attic space. If there are occupants on the second story in the probable path of the fire, the IC should recognize this critical cue regarding life safety issues.

The **occupancy and contents** of the building, along with the construction, will indicate the fire load involved and the potential amount of heat that will be given off. The type of occupancy will give definite clues as to the life hazards that may be present. Knowledge of the building contents can identify safety hazards to both occupants and fire-control personnel. For example, an educational occupancy, such as a school, normally will have a fire load described as "light." This means approximately five to ten pounds of material per square foot of floor space. In a modern, noncombustible school structure, the travel of fire from classroom to classroom should be relatively slow. However, one should be aware that school fires may be intentionally set (especially in late night or early morning hours) and that the rate of fire spread may be accelerated in this case.

An open storage occupancy, such as a furniture warehouse, normally will have a heavy fire load of more than 20 pounds per square foot of floor space. The wide-open nature of a warehouse coupled with the high fire load, will allow the fire to extend very rapidly through the structure.

The **location of the building** is important in relation to accessibility, water supply, exposure hazards, or other conditions that might hamper control operations. The location of the building will indicate the extent of the exterior exposure problem. The seriousness of this problem will depend on the volume of fire and the amount of heat generated. To a large degree, these are determined by the construction and contents of the building.

The **location of the fire** within the building, its present volume, and its extent are critical factors in determining what initial action should be taken to control the fire. They also give an indication of the interior exposure hazard and the most desirable direction from which an attack should be made. The extent of the fire and the amount of heat being given off will indicate whether heavy-stream appliance will be needed or whether handlines can do the job. This will dictate the location, number, and size of lines needed. As an example, a strip shopping center with a common attic space above all the occupancies has a well-involved fire in a single occupancy. Prediction would indicate that this fire has probably reached the common attic space. This fire would be threatening the horizontal exposed occupancies, with further extension down the common attic space. Since most strip shopping centers are well-locked at the rear, front entry and fire attack are most often done, even though this is against the "unburned to burned" rule of thumb. It often is necessary to attack such fire with portable master stream devices due to the amount of heat generated and the reach required.

Time of day and prevailing weather conditions are variables that can have a very critical effect on a size-up in certain situations. Depending on the occupancy, time will indicate the extent of life hazard involved, and

the problems that might be encountered in gaining access to the fire. For example, fires occurring in residential occupancies during the late night or early morning hours pose increased life-safety hazards. A fire in a commercial occupancy at these same times usually indicates a diminished life-safety concern, but can mean that forced entry is required to reach the fire. Weather can play an important part in the rate of fire development and the manner in which it spreads. Temperature and humidity will help determine how fast materials will burn and how smoke and fire gases will behave. Temperature can be not only a fire factor but also a fatigue factor which may indicate that the early need for relief personnel must be considered.

An estimate of the **probable behavior of the fire** is necessary to determine what strategy and tactics will be used as well as what resources will be required to control the situation. Information regarding the present size/extent of the fire, coupled with knowledge of other factors discussed to this point, allow a fire officer to make a logical estimate of how the fire will progress and to make appropriate decisions. The quantity of smoke, coupled with the speed at which the smoke is leaving the structure, may indicate the relative size and extent of the fire. For example, if fire/smoke is issuing from all windows including the basement in a single family dwelling, or is issuing from the chimney and the basement windows, it would indicate a basement fire. Observation or reports from other personnel may assist the officer in understanding how much of the structure is involved. In addition, knowledge of building construction and configuration, fire load, occupancy type, etc., assist the officer to make effective decisions regarding strategy, tactics, and resources needed. The number of fire companies needed as well as operations that might be performed are dictated by the anticipated size and extent of the fire when these resources will be in position to attack the fire.

Preplan considerations developed during prior firefighting inspections of the building should be included in the size-up. If this information has been recorded on some type of form at the scene, it can be reviewed quickly to determine relevant details about the building or operational procedures outlined on the form.

Following an assessment of what the fire situation is or will be, an **evaluation of resources** is in order. What companies are included in the first-alarm assignment? Will they be sufficient to handle the fire? Answering this question requires a knowledge of fire flow and resource capability so the officer can determine the amount of water in gallons per minute needed to extinguish the fire. With this knowledge the officer can determine the number of personnel required for aggressive interior fire attack, as long as that officer understands what gpm his department can flow per person on the fireground. For example, a fire requires 450 gpm to be extinguished. The responding fire department has the ability to

deliver 30 gpm per person on the fire ground (30 gpm is a rough rule of thumb). Divide 450 by 30 for the answer of 15 personnel. Call enough resources to provide the 15 personnel and the fire should be extinguished with sufficient personnel doing command, pump operations, hoseline application, and truck company work.

Other questions to consider include whether the first-alarm assignment includes all the equipment that might be needed. If you call for additional help, what will be the extent of the fire when the help arrives? The resource evaluation that is done as part of the size-up must match existing or probable problems to the amounts of personnel and equipment that will be needed to deal with these problems. This process allows assigning resources to problems on a priority basis. For example, first company to rescue, second company fire attack, third company ventilation, etc. If, during the size-up, it becomes apparent that the problems are too much for the first-alarm assignment to handle, additional help can be requested at that time, rather than waiting until the need becomes obvious.

WALLACE WAS HOT

An acronym used for training in the factors affecting size-up is **WALLACE WAS HOT**. The thirteen points of consideration Wallace outlines are:

Water
Apparatus/Personnel
Life
Location/Extent
Area
Construction
Exposures

Weather
Auxiliary appliances
Special hazards

Height
Occupancy
Time

Trying to remember all thirteen factors when the flames are turning water to steam can make your head hurt. They are better used for training purposes and for keying in on those factors which are present at the incident.

RISK/BENEFIT EVALUATION

Risks Taken are Worth Benefits Gained

While all of us recognize that firefighting can be dangerous and full of risk, one of the first decisions the initial IC needs to make is based on a risk/benefit evaluation. For firefighter safety, the risk/benefit decision for any task to be attempted is the most important decision the IC has to make. The IC must assess the current conditions and determine whether the potential benefits are worth risking firefighters by committing them to an aggressive interior attack. Too often firefighters' lives are jeopardized attempting to put out a fire in a building where there is danger of collapse or where damage is so extensive there is nothing worth saving. Other firefighters are asked to risk their safety to rescue victims with little or no chance of survival.

If it is Worth Risk, for How Long?

Should the IC decide the risk is worth the benefits, the next thing that must be determined is for how long. The IC must continually reassess structural conditions, especially when a fire continues to gain headway regardless of firefighters' actions. Risk/Benefit analysis is even more critical when the initial decision had a high-risk component to begin with. Lightweight construction can fail in as little as five minutes after flame involvement. For this reason, you may want to consider outside streams. Modern construction is not designed to maintain its integrity during fire conditions, and building collapse occurs earlier than in older, more substantial buildings. We do not always know how long or how intensely the fire has been burning prior to our arrival. The length of time firefighters can be expected to sustain an interior attack may therefore be limited. The available resources and needed fire flow should be a part of the IC's considerations. Not enough resources or available water may mean that the risk outweighs the benefits.

Although it may be the hardest decision an IC is ever asked to make, there are times when attempting to make a rescue or an interior attack may be too great a risk to the safety of the firefighters, and is not worth the benefits. Failure to do a risk/benefit evaluation is the ultimate example of not being proactive and failing to look after the safety of personnel.

Selecting Operational Mode

Based on the risk/benefit evaluation, the IC selects the operational mode. The IC has a choice of three modes of operation. They are:

1. Offensive.

2. Defensive.

3. Transitional.

Should the IC choose the **offensive mode**, it means that carrying on an aggressive interior attack is worth the risk to firefighter safety, and that sufficient resources and water are available to meet the incident demands.

Indicators for a **defensive** operation include danger of imminent collapse, the building already is lost, conditions indicate survival of any victims trapped inside is unlikely, or insufficient resources are available to deal with the problems effectively. Some rules of thumb for determining the likelihood of collapse include heavy fire involvement (over 50 percent); lightweight construction--especially parallel-chord wood truss assemblies; and, for noncombustible construction types, unprotected steel framing and steel bar-joists. Another example would be an ordinary (masonry, wood-joist) constructed building with major fire on two floors for 20 minutes. (Remember, the 20 minutes started at the time when the call came in, not when you arrived.) Understand that the fire load on these buildings can significantly reduce this timeframe.

When operating in the defensive mode the IC needs to keep close track of personnel to assure they understand the plan and do not freelance. Firefighters often believe one desperate act can save the day, and will take ill-advised actions to turn the tide of battle. This leads to unsafe acts and loss of personnel.

Defensive operations often end up with master streams protecting exposures and big water on the involved structure with little impact on the eventual outcome of the fire. A collapse zone should be established to keep firefighters out of danger at a time when there is no logical reason for the safety of personnel to be jeopardized.

During the **transitional mode** forces at the scene are switching from one mode to another. An example would be when the decision is made not to make entry (defensive) until additional resources are available and an interior attack can be mounted (offensive). Another is when efforts are directed at confining the fire until rescue can be accomplished (offensive), after which personnel are withdrawn to protect exposures (defensive).

Any time the decision is made to switch from one operational mode to another, particular attention should be given to make sure the switch is communicated to all personnel at the incident, and that confirmation of the change is received.

Resource Evaluation

Committing Resources

Once the IC makes the best judgment as to the problem(s) present at the incident, a quick evaluation can determine if the current or responding resources are sufficient to address those problems. If there is a question whether the IC has enough resources the answer is easy: **When in doubt, get more help**! It is much easier to turn resources around than it is to need them and not have them already available or on their way.

COMMAND DECISIONS

Another decision facing the first-arriving officer is what individual action to take. The first-in officer has three choices available:

1. Incident Commander.

2. Combat--Hands-on Incident Commander.

3. Tactically Involved Incident Commander.

COMMAND OPTIONS

The first-arriving unit or member to assume Command of the incident has several command options, depending on the situation. If a Chief Officer, member, or unit without tactical capabilities (i.e., staff vehicle, no equipment, etc.) initiates Command, the establishment of a Command Post (CP) should be a top priority. At most incidents, the initial Incident Commander (IC) will be a Company Officer (CO). The following Command options define the CO's direct involvement in tactical activities.

Nothing-Showing Mode: These situations generally require investigation by the initial arriving company while other units remain in a staged mode. The CO should go with the company to investigate while using a portable radio to command the incident.

Fast-Attack Mode: Situations that must be stabilized immediately require the CO's assistance and direct involvement in the attack. In these situations, the CO goes with the crew to provide the appropriate level of supervision. Examples of these situations include

- Offensive fire attacks (especially in marginal situations).

- Critical life safety situations (i.e., rescue) which must be achieved in a compressed timeframe.

- Any incident where the safety and welfare of firefighters are major concerns.

- Obvious working incidents that require further investigation by the CO.

Where fast intervention is critical, using a portable radio will permit the CO's involvement in the attack without neglecting Command responsibilities. The Fast-Attack mode should not last more than a few minutes and will end with one of the following:

- The situation is stabilized.

- The situation is not yet stabilized, and the CO may withdraw to the exterior and establish Command in a fixed location. At some time, the CO must decide whether or not to withdraw the remainder of the crew, based on the crew's capabilities and experience, safety issues, and the ability to communicate with the crew. No crew should remain in a hazardous area without radio communications capabilities.

- The situation is not yet stabilized, and the CO remains inside with the crew in a Combat/Command mode. This option is chosen when the officer can make a difference in the effectiveness of the crew.

- Command is transferred to another officer. When a Chief Officer is assuming Command, the Chief Officer may opt to return the CO to his/her crew, or assign him/her to a subordinate position.

Command Mode: Certain incidents, by virtue of their size, complexity, or potential for rapid expansion, require immediate strong, direct, overall Command. In such cases, the CO initially will assume an exterior, safe, and effective Command position and maintain that position until relieved by another officer. A tactical worksheet shall be initiated and used to assist in managing this type of incident.

If the CO selects the Command mode, the following options are available regarding the assignment of the remaining crew members.

- The CO may "move up" within the company, and place the company into action with the remaining members. One of the crew members will serve as the acting CO and should be provided with a portable radio. The collective and individual capabilities and experience of the crew will regulate this action.

- The CO may assign the crew members to work under the supervision of another CO. In such cases, the officer assuming Command must communicate with the officer of the other company and indicate the assignment of those personnel.

- The CO may elect to assign the crew members to perform staff functions to assist Command.

A CO assuming Command has a choice of modes and degrees of personal involvement in the tactical activities, but continues to be fully responsible for the Command functions. The initiative and judgment of the officer are of great importance. The modes identified are guidelines to assist the officer in planning appropriate actions. The actions initiated should conform with one of the previously mentioned modes of operations.

BRIEF INITIAL REPORT

The Brief Initial Report (BIR), often called the status report, is critical information that is transmitted by the first-arriving unit at an incident. This report is more than just an adrenaline increaser that gets the heart beating faster: it conveys important information to those units not yet on location. Simply stating **"working fire"** or **"fully involved"** is insufficient. It is important that the report be transmitted in clear text so that all the agencies involved in the incident receive the same information.

It is assumed that all of us know that the tactics for an attic fire are much different than those for a basement fire. By giving effective information in a standard format, we increase the ability of later-arriving companies and chiefs to be prepared mentally to assist the first-arriving unit quickly. We give the later-arriving units a moment or two to consider what tactical operations we do to handle a specific type of situation.

The recommended format is

> Engine ___ arrived location Side ___ (state Side of the facility) of (describe the facility briefly).
>
> (Describe the situation specifically and the mode of operation.)

Engine ___ crew is (describe what your crew as been assigned to do and where).

Captain Engine ___ is Command on Side ___ (state Side).

Assign the other resources, as needed.

Example:

Engine 1 arrived location Side A of a two-story dwelling.

I have heavy smoke and fire showing from the second floor, Side C, offensive operation.

Engine 1's crew is making an interior attack and starting primary search on the second floor from Side A.

Also, be aware that the other responding units need to know your strategies to assist and operate at the scene effectively. Your strategies need to be conveyed to the other resources when you give them their tactical or task assignments.

What Do I Have?

When answering the question "What do I have?" the report should include the approximate size of the building, number of stories, construction type, occupancy, and an accurate description and location of the fire and/or smoke conditions present.

What Am I Doing?

Advise the other units what actions you are taking by giving them the answer to "What am I doing?" Let them know the initial tasks you are carrying out, your point of entry into the building, and your location in the involved structure if in an offensive mode.

What Do I Need?

If the initial plan calls for assignments for other responding units, let them know "What do I need?" Use the communications model to communicate the assignments and to get confirmation that assignments have been understood. Officers should not give assignments just to get other units into action. If the answer to "What do I have?" is "I don't know," take the time to find out before you take any action that could have an adverse

effect, and wait to assign the other units. The best answer to "What do I need?" may be "Nothing right now." If this is the answer you come up with, have the other units stage close enough to the structure to respond to all four sides of the building and wait until you determine what the problem is.

Who Is In Command?

Every report should include the answer to "Who is in command?" While it is assumed the first-arriving officer is in command until such time command is transferred, the initial report should make it clear whether that first officer is keeping command or if it is being transferred, and to whom. If there are simultaneous alarms, the initial indication should also designate a name for the incident such as "First Street Command." This will eliminate confusion among other units and dispatch as to whether a call is from "First Street Command" or another incident operating as "Main Street Command." It is one more step in reducing confusion and improving firefighter safety.

Good Size-up Report

A good size-up report alerts others and gives them a clear indication of conditions and the scope of the problem. Not all of us respond to a major fire every time we roll out of the door. The majority of our calls are often routine and of a minor nature. As we rumble down the street, our minds are idle assuming this is just another usual call. Our minds go from idle to warp 2 in a heartbeat if we hear an officer vividly describe a working fire. A good size-up report allows others to get their minds up to speed before they arrive on-scene.

A bad size-up report provides little new information, for example:

- Engine I arrived location, working fire. Engine 1 in charge.

A good size-up report gives appropriate information and paints a picture, for example:

- Engine 1 arrived location Side A of a two-story dwelling, 101 Third Avenue. Heavy fire and smoke showing from a second floor window on Side C. Engine 1's crew is making an interior attack from Side A. Lieutenant Engine 1 is Command.

PHASE THREE: ONGOING SIZE-UP

Size-up does not stop once the action plan is implemented and firefighters are taking action. Size-up needs to be ongoing throughout the entire incident. The initial information available to the IC upon arrival is often incomplete or wrong. The IC needs to increase his/her knowledge of the incident to have as good an understanding as possible of what the problems are, how the action plan is working, whether there are enough of the right resources, and if there are existing or potential safety hazards.

Situation Status

The Incident Command System (ICS) has two position descriptions which outline the types of information that needs to be developed. The first is Situation Status which is an ongoing analysis of the progress of the incident. Is the action plan working? Have the problems been correctly identified? What is the fire-behavior prediction? What is the likely outcome of our current actions? Simply stated, situation status can be described as "less building, more fire--situation bad," "fire going away, building staying--situation good." If you have more fire and less building, situation status should provide you with the answer as to why this is happening, and what can be done to turn things around.

Resource Status

Resource Status is an analysis of effectiveness of current resources and identification of needed or anticipated resources. Resources include apparatus, equipment, and personnel. Do you have enough resources? Can the IC make all the tactical assignments required to control the situation effectively? Are there sufficient reserves on hand to replace tired crews or crews that need air bottle changes? Does the IC need an aerial ladder, haz mat response company, light unit, air cascade unit, or other specialized apparatus? Does the IC need trained haz mat personnel, a chemist, a building engineer, an architect, etc.? If another alarm is required, a good rule to follow is: As soon as you determine that all units will be deployed, call for additional units.

Responsibility for Ongoing Flow of Information

In order for the IC to have a clear picture of the status of the situation and the resources available, there must be an ongoing flow of information between the IC and those who are carrying out the action plan. The IC is responsible for developing, implementing, and modifying the action plan and has the responsibility of protecting the safety of personnel. To do this

effectively the IC must be making decisions based on as much information as it is practical to gather. This requires those inside the building where the action is to keep the IC informed if they are meeting their assignment, and if not, why not; additional resource needs; whether resources are available to be released or reassigned; if conditions have changed significantly since the initial assignment; and if there are any unusual conditions or safety hazards.

The responsibility for the flow of this information belongs to everyone. Personnel operating at the incident must understand the IC's need to know and provide periodic updates. If the updates are not forthcoming, the IC should understand it is easy for those inside where it is hot, smoky, and dangerous to have other things on their minds. This may require the IC to ask regularly for updates if they don't come voluntarily. However it happens, the flow of information **must** take place.

SUMMARY

Size-up is more than what you see through the windshield upon arrival. It is a wealth of preincident information available prior to the incident which can help the first-arriving officer make sound decisions.

The initial size-up must be done in a calm, objective manner assuring that the officer first identifies the problem(s) before applying the solution. If action is the first step in the process, the safety of personnel is jeopardized, and resources may not be utilized to their maximum effectiveness.

An important part of the initial size-up is the brief initial report, which paints a vivid word picture of conditions. This gives the other responding units a clear understanding of the extent of the incident and gets them up to speed.

Size-up is ongoing throughout the incident and requires that the IC have as much information as possible in order to make sound decisions and to protect the safety of personnel.

To do a complete size-up officers should understand the three phases of:

1. Preincident information.

2. Initial size-up.

3. Ongoing size-up.

Activity 2.3

Brief Initial Report--"What Do I Have?"

Purpose

Develop the ability to paint a vivid word picture of conditions during a brief initial arrival report.

Directions

1. Your group will be assigned a scenario. As a group, you will be given 5 minutes to write your group's answer to the question, "What Do I Have?" on an easel pad. Your instructor will show a slide indicating what you see when you arrive.

2. Your group shall select a spokesperson to give your group's report when called upon.

Example Scenario

- two-story, 40' x 18', townhouse;
- fire and smoke showing from Side A, first floor; and
- smoke showing second floor, Side A.

Scenario 1--Two-story Apartment House

Scenario 2--Small Shopping Center

Scenario 3--Community Bar

Scenario 4--Townhouse

Scenario 5--Apartments Under Construction